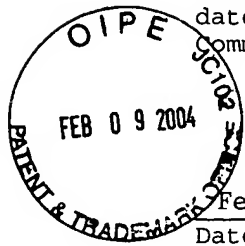


Certificate of Mailing [37 CFR 1.8(a)]

I hereby certify that this paper and the documents referred to as attached therein are being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



February 5, 2004

Date

Denise Ortega

Name

*Denise Ortega*

Signature

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Claudiu Supuran et al.

Serial No.: 10/723,795

Group Art Unit:

Filed : November 26, 2003

Examiner:

For : CA IX-Specific Inhibitors

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR SECTIONS 1.56, 1.97 AND 1.98

MAIL STOP PATENT APPLICATION  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The accompanying PTO Form 1449 is submitted pursuant to 37 CFR Sections 1.56, 1.97 and 1.98, directing Applicants to submit literature and information that may be considered material to the examination of the claims of an application. Applicants respectfully submit that this Information Disclosure Statement (IDS) should be considered in accordance with 37 CFR Section 1.97(b)(1), as it is being submitted within three months of the filing date of the subject application, and that no fee is required for its consideration. However, should any fees be determined to be necessary in connection with this paper,

Applicants respectfully request that any such fees be charged to Deposit Account No. 12-0615.

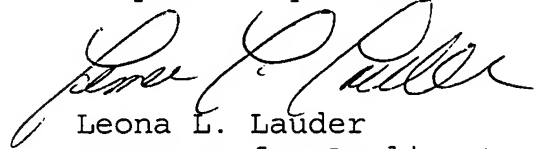
Applicants respectfully point out that the "filing of an information disclosure statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in Section 1.56(b)" [37 CFR Section 1.97(h)]; and that an information disclosure statement filed in accordance with 37 CFR Section 1.97 "shall not be construed as a representation that a search has been made." [37 CFR Section 1.97(g)]

Further the identification of any document herein is not intended to be, and, Applicants respectfully submit, should not be construed as being, an admission that such a document, in fact, constitutes "prior art" within the meaning of the applicable laws, since, for example, a given document may have a later effective date than at first seems apparent, or the document may have an effective date which can be antedated. Applicants respectfully conclude on this point that the "prior art" status of any document is a matter to be resolved during prosecution.

Thus, Applicants respectfully conclude that the citation of references herein is not intended to be an admission that any of the references are considered to be material or to constitute prior art, or that any of the references, either alone or in combination with any other references, would be sufficient

to render any of the claims of the above-identified patent application unpatentable.

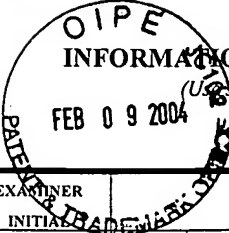
Respectfully submitted

A handwritten signature in black ink, appearing to read "Leona L. Lauder", written in a cursive style.

Leona L. Lauder  
Attorney for Applicant  
Registration No. 30,863

Dated: February 5, 2004

<p align="center"><b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)</p> <p align="center"><b>FEB 09 2004</b></p>		Docket Number (Optional) <b>MST-2393 US</b>	Application Number <b>10/723,795</b>
		Applicant(s) <b>Supuran et al.</b>	
		Filing Date <b>November 26, 2003</b>	Group Art Unit
*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	<p>Sasini et al., "Carbonic Anhydrase Inhibitors: Water-Soluble 4-Sulfamoylphenylthioureas as Topical Intraocular Pressure-Lowering Agents with Long-Lasting Effects," <u>J. Med. Chem.</u>, <b>43</b>: 4884-4892 (2000)</p>		
	<p>Chegwidden et al., "The Roles of Carbonic Anhydrase Isozymes in Cancer," <u>Gene Families: Studies of DNA, RNA, Enzymes and Proteins, Proceedings of the International Isozymes, 10th, Beijing, China, Oct. 5-10, 1999, Meeting Date 1999, 157-169</u> (Xue, G. ed.; World Scientific Pub. Co.; 2001)</p>		
	<p>Clare and Supuran, "Carbonic anhydrase inhibitors. Part 61. Quantum chemical QSAR of a group of benzenedisulfonamides," <u>Eur. J. Med. Chem.</u>, <b>34</b>: 463-474 (1999)</p>		
	<p>Cuthbert et al., "Bicarbonate-dependent chloride secretion in Calu-3 epithelia in response to 7,8-benzoquinoline," <u>J. Physiol.</u>, <b>551</b>(Pt 1): 79-92 (2003 Aug 15)</p>		
	<p>Franchi et al., "Carbonic Anhydrase Inhibitors. Inhibition of Cytosolic Isozymes I and II and Transmembrane, Cancer-associated Isozyme IX with Lipophilic Sulfonamides," <u>Journal of Enzyme Inhibition and Medicinal Chemistry</u>, <b>18</b>(4): 333-338 (Aug. 2003)</p>		
	<p>Ilies et al., "Carbonic Anhydrase Inhibitors. Inhibition of Tumor-Associated Isozyme IX by Halogenosulfanilamide and Halogenophenylaminobenzolamide Derivatives," <u>J. Med. Chem.</u>, <b>46</b>: 2187-2196 (2003)</p>		
	<p>Pastorek et al., "Cloning and characterization of MN, a human tumor-associated protein with a domain homologous to carbonic anhydrase and a putative helix-loop-helix DNA binding segment," <u>Oncogene</u>, <b>9</b>: 2877-2888 (1994)</p>		
	<p>Scozzafava and Supuran, "Carbonic Anhydrase Inhibitors: Synthesis of <i>N</i>-Morpholythiocarbonylsulfenylamino Aromatic/Heterocyclic Sulfonamides and their Interaction with Isozymes I, II and IV," <u>Bioorganic &amp; Medicinal Chemistry Letters</u>, <b>10</b>: 1117-1120 (2000)</p>		
	<p>Scozzafava et al., "Carbonic Anhydrase Inhibitors. Synthesis of Water-Soluble, Topically Effective, Intraocular Pressure-Lowering Aromatic/Heterocyclic Sulfonamides Containing Cationic or Anionic Moieties: Is the Tail More Important than the Ring?" <u>J. Med. Chem.</u>, <b>42</b>: 2641-2650 (1999)</p>		
	<p>Scozzafava et al., "Carbonic Anhydrase Inhibitors: Synthesis of Membrane-Impermeant Low Molecular Weight Sulfonamides Possessing in Vivo Selectivity for the Membrane-Bound versus Cytosolic Isozymes," <u>J. Med. Chem.</u>, <b>43</b>: 292-300 (Jan. 27, 2000)</p>		
	<p>Sterling et al., "The functional and physical relationship between the DRA bicarbonate transporter and carbonic anhydrase II," <u>Am. J. Physiol. Cell Physiol.</u>, <b>283</b>(5): C1522-C1529 (Nov. 2002)</p>		
	<p>Supuran and Clare, "Carbonic anhydrase inhibitors. Part 24. A quantitative structure-activity relationship study of positively charged sulfonamide inhibitors," <u>Eur. J. Med. Chem.</u>, <b>30</b>: 687-696 (1995)</p>		
EXAMINER	DATE CONSIDERED		
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>			

 <p><b>OIPE</b> <b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary) <b>FEB 09 2004</b></p>		Docket Number (Optional) <b>MST-2393 US</b>	Application Number <b>10/723,795</b>
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*EXAMINER INITIALS	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	Supuran and Clare, "Carbonic anhydrase inhibitors - Part 57: Quantum chemical QSAR of a group of 1,3,4-thiadiazole- and 1,3,4-thiadiazoline disulfonamides with carbonic anhydrase inhibitory properties," <u>Eur. J. Med. Chem.</u> , <b>34</b> : 41-50 (1999)		
	Supuran and Scozzafava, "Carbonic Anhydrase Inhibitors: Aromatic Sulfonamides and Disulfonamides Act as Efficient Tumor Growth Inhibitors," <u>J. Enzyme Inhib.</u> , <b>15</b> (6): 597-610 (2000)		
	Supuran and Scozzafava, "Carbonic anhydrase inhibitors - Part 94. 1,3,4-Thiadiazole-2-sulfonamide derivatives as antitumor agents?," <u>Eur. J. Med. Chem.</u> , <b>35</b> (9):867-874 (Sept. 2000)		
	Supuran et al., "Carbonic anhydrase inhibitors - Part 53. Synthesis of substituted-pyridinium derivatives of aromatic sulfonamides: The first non-polymeric membrane-impermeable inhibitors with selectivity for isozyme IV," <u>Eur. J. Med. Chem.</u> , <b>33</b> : 577-594 (1998)		
	Supuran et al., "Carbonic anhydrase inhibitors - Part 29: Interaction of isozymes I, II and IV with benzolamide-like derivatives," <u>Eur. J. Med. Chem.</u> , <b>33</b> : 739-751 (1998)		
	Supuran et al., "Carbonic Anhydrase Inhibitors: Synthesis of Sulfonamides Incorporating 2,4,6-Trisubstituted-Pyridinium-Ethylcarboxamido Moieties Possessing Membrane-Impermeability and In Vivo Selectivity for the Membrane-Bound (CA IV) Versus the Cytosolic (CA I and CA II) Isozymes," <u>J. Enzyme Inhibition</u> , <b>15</b> (4): 381-401 (2000)		
	Supuran et al., "Carbonic Anhydrase Inhibitors: Sulfonamides as Antitumor Agents?," <u>Bioorganic &amp; Medicinal Chemistry</u> , <b>9</b> (3): 703-714 (March 2001)		
	Supuran et al., "Carbonic Anhydrase Inhibitors," <u>Medicinal Research Reviews</u> , <b>23</b> (2): 146-189 (March 2003)		
	Teicher et al., "A Carbonic Anhydrase Inhibitor as a Potential Modulator of Cancer Therapies," <u>Anticancer Research</u> , <b>13</b> : 1549-1556 (1993)		
	Vullo et al., "Carbonic Anhydrase Inhibitors. Inhibition of Cytosolic Isozymes I and II and Transmembrane, Cancer-associated Isozyme IX with Anions," <u>Journal of Enzyme Inhibition and Medicinal Chemistry</u> , <b>18</b> (5): 403-406 (Oct. 2003)		
	Vullo et al., "Carbonic Anhydrase Inhibitors: Inhibition of the Tumor-Associated Isozyme IX with Aromatic and Heterocyclic Sulfonamides," <u>Bioorganic Medicinal Chemistry Letters</u> , <b>13</b> (6): 1005-1009 (March 24, 2003)		
	Wingo et al., "The Catalytic Properties of Human Carbonic Anhydrase IX," <u>Biochemical and Biophysical Research Communications</u> , <b>288</b> : 666-669 (2001)		
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<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>			

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MST-2393 US

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Applicant(s)

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INITIALS

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Winum et al., "Carbonic Anhydrase Inhibitors. Inhibition of Cytosolic Isozymes I and II and Transmembrane, Tumor-Associated Isozyme IX with Sulfamates Including EMATE Also Acting as Steroid Sulfatase Inhibitors," J. Med. Chem., 46(11): 2197-2204 (May 22, 2003)

Wistrand and Lindqvist, "Design of Carbonic Anhydrase Inhibitors and the Relationship Between the Pharmacodynamics and Pharmacokinetics of Acetazolamide," In Carbonic Anhydrase - From Biochemistry and Genetics to Physiology and Clinical Medicine, Botrè et al., Eds., VCH, Weinheim, pp. 352-378 (1991)

Wu et al., Cytoplasmic pH Responses to Carbonic Anhydrase Inhibitors in Cultured Rabbit Nonpigmented Ciliary Epithelium," J. Membrane Biol., 162: 31-38 (1998)

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